



***DARPA*Tech**

2002 Symposium

Transforming
Fantasy



Peter T. Highnam
Program Manager



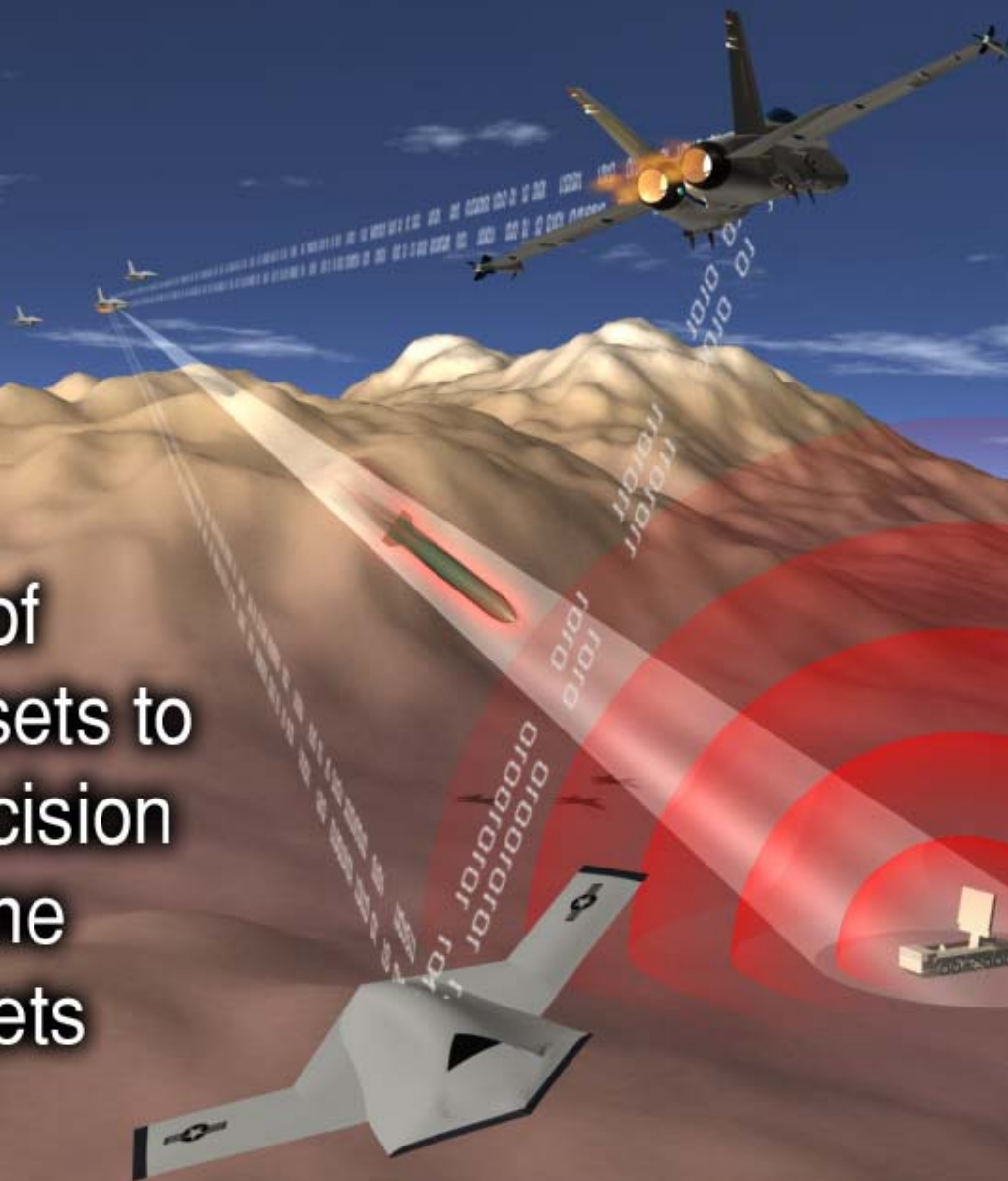
Communications for Network Centric Targeting

Peter Highnam

Information Exploitation Office



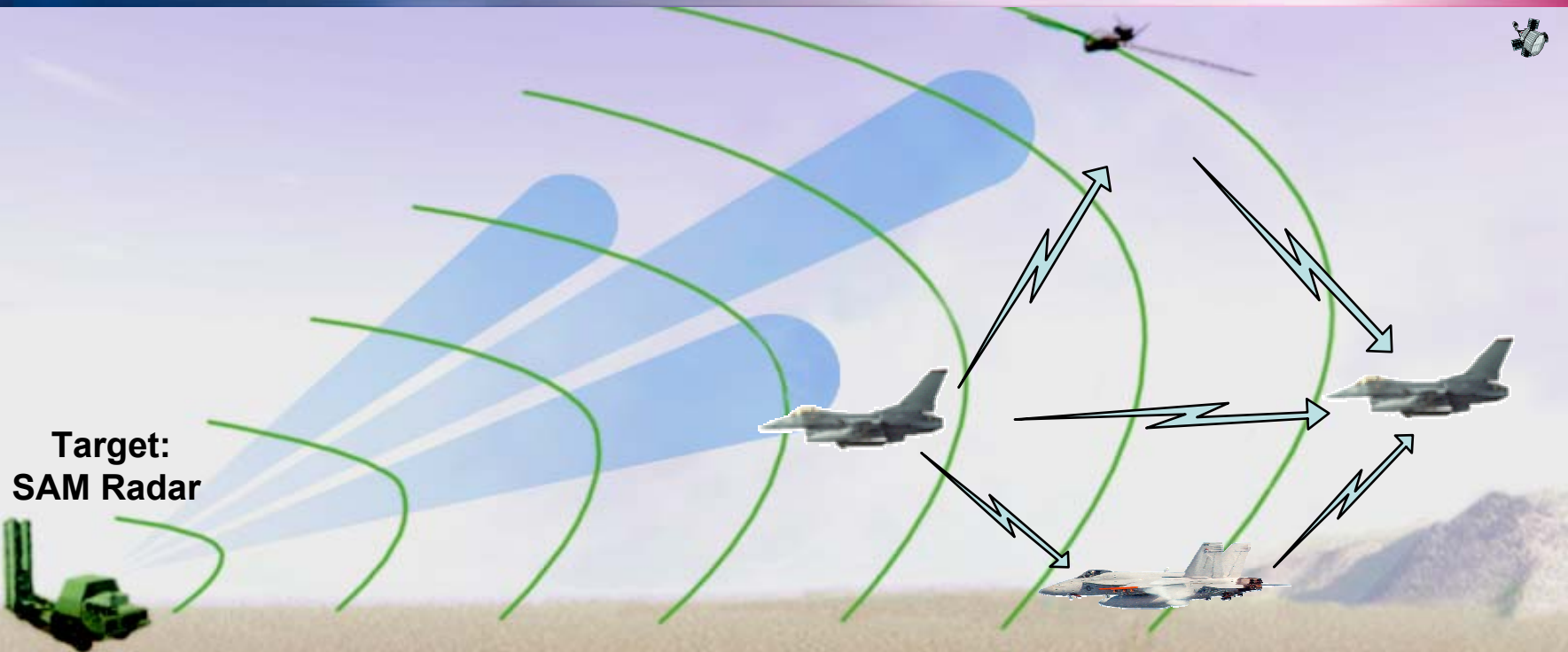
Responsive Networking of Airborne Assets to Support Precision Strike on Time Critical Targets



Communications Infrastructure Investments



The AT3 Motivation



- Very Rapid, Very Precise Emitter Geolocation
- Platforms of Opportunity – Highly Dynamic

Technical Performance Goals

Total system rate	10+Mbit/s
Single platform rate	2Mbit/s @ 100 nm 500Kbit/s @ 200 nm 220Kbit/s @ 300 nm
Latency	2 ms @ 100 nm 6 ms @ 200 nm 30 ms @ 300 nm
Number of platforms	200+
Platform separation	300 nm
Flexibility	Completely dynamic



**SIMPLE AS A
CELL PHONE**

JTRS

**INSTANT
MESSENGER**

**MINIMAL SUPPORT
INFRASTRUCTURE**

**CAPACITY AVAILABLE
WHERE NEEDED**

SECURE

TTNT

**FAST AS
ETHERNET**

**NO NEW HOLES
NO NEW CABLES**

**AIR-TO-AIR AND
AIR-TO-GROUND**

**100% INTEROPERABLE
WITH LINK 16**

**AD HOC MOBILE
NETWORK**



Wireless Networking Technology for Tactical Aircraft

- ▶ System Control & Media Access
- ▶ Interoperability with existing Data Links
- ▶ Spectrum Availability
- ▶ Inexpensive Installation

Link 16
+
TTNT



TTNT

Responsive
Networking of
Airborne Assets to
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